

WHAT IS CLAIMED IS:

1. A temperature-sensitive thermogelling emulsion delivery system,
comprising:

a biodegradable temperature-sensitive aqueous phase
polymer solution;

at least one bioactive substance, and

a pharmaceutically acceptable oil phase carrier, said oil
carrier embeds said bioactive substance;

wherein

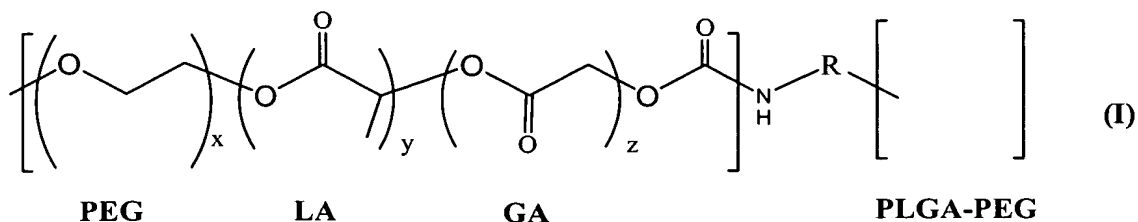
said oil phase carrier and said temperature-sensitive
polymer solution are mixed mutually to form an emulsion, which
is a liquid while at a temperature below a lower critical solution
temperature (LCST) and transforms into a gel while the
temperature of the emulsion is above said lower critical solution
temperature (LCST).

2. The delivery system as claimed in claim 1, wherein said
bioactive substance is embedded in said oil phase carrier by the
means of dissolving, solid suspension or water/oil
emulsification.

3. The delivery system as claimed in claim 1, wherein said
temperature-sensitive polymer is selected from the group
consisting of PEG-PLGA-PEG, PLGA-PEG-PLGA,
PEG-PLGA and Poloxamor 407.

4. The delivery system as claimed in claim 3, wherein said

PEG-PLGA-PEG is represented as formula (I):



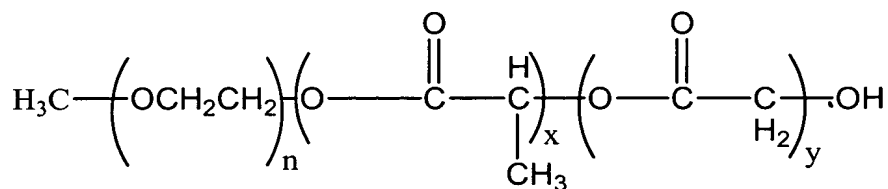
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(I)

wherein x is a positive integer between 5 to 20; y is a positive integer between 20 to 40; z is a positive integer between 5 to 20; and R is the substituted linear or branched C₂ to C₁₀ alkyl group.

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5. The delivery system as claimed in claim 3, wherein said PEG-PLGA is represented as formula (II):



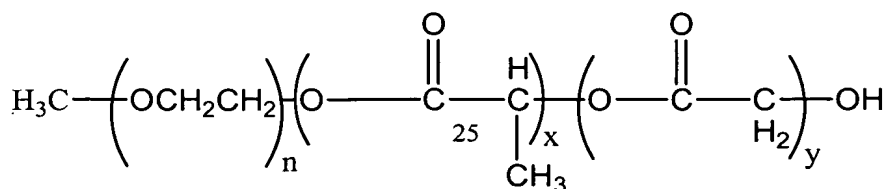
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(II)

wherein n is a positive integer between 5 to 20; x is a positive integer between 20 to 40; and y is a positive integer between 5 to 20.

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6. The delivery system as claimed in claim 3, wherein said Poloxamer 407 is represented below:



- 5 7. The delivery system as claimed in claim 1, wherein said physiologically accepted oil phase carrier is a fatty acid ester.
- 10 8. The delivery system as claimed in claim 7, wherein said physiologically accepted oil phase carrier is selected from the group consisting of lipiodol, medium chain triglyceride (MCT), soybean oil, sesame oil, castor oil, sunflower oil, mineral oil, vitamin E oil or a mixture of them.
- 15 9. The delivery system as claimed in claim 1, wherein at least one bioactive substance is selected from the group consisting of chemical compound, protein, peptide, nucleic acid, polysaccharide, carbohydrate, lipid, glycoprotein and imaging agent.
10. The delivery system as claimed in claim 1, which is used for subcutaneous injection, intramuscular injection, intratumor injection or embolism agent.